



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,224	10/20/2003	Steven S. Nasiri	IVS-101/US	2315
30869	7590	08/10/2004	EXAMINER	
LUMEN INTELLECTUAL PROPERTY SERVICES, INC.			KWOK, HELEN C	
2345 YALE STREET, 2ND FLOOR			ART UNIT	
PALO ALTO, CA 94306			PAPER NUMBER	
			2856	

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/690,224

Applicant(s)

NASIRI ET AL.

Examiner

Helen C. Kwok

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 17-28 and 34-49 is/are rejected.
- 7) ☒ Claim(s) 13-16 and 29-33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date October 20, 2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 6-9, it is unclear what the linkage is connected to. Is one end of the linkage connected to the frame and the other end to a mass, but there are two masses? Or, is one end of the linkage connected to the first mass and the other end connected to the second mass? Please clarify.

In claim 8, line 3, the phrase "said sensor plane" lacks antecedent basis.

In claim 11, line 3, the phrase "said sensor plane" lacks antecedent basis.

In claim 13, line 9, the phrase "said plates" is vague. Is this referring to all of the plates (i.e. center plate, first plate and second plate) or some of the plates? Please clarify. In line 10, the phrase "said sensor plane" lacks antecedent basis.

In claim 14, lines 4-5, the phrase "said sensor plane" lacks antecedent basis.

In claim 15, lines 3-4, the phrase "said sensor plane" lacks antecedent basis.

In claim 16, line 4, the phrase "said sensor plane" lacks antecedent basis.

Art Unit: 2856

In claim 17, lines 3-4, the phrase "said sensor plane" lacks antecedent basis.

In claim 18, line 5, the phrase "said sensor plane" lacks antecedent basis.

In claim 19, lines 3-4, the phrase "said sensor plane" lacks antecedent basis.

In claim 23, lines 3-4, the phrase "said sensor plane" lacks antecedent basis.

In claim 26, line 3, the phrase "said sensor plane" lacks antecedent basis.

In claim 29, line 9, the phrase "said plates" is vague. Is this referring to all of the plates (i.e. center plate, first plate and second plate) or some of the plates? Please clarify. In line 10, the phrase "said sensor plane" lacks antecedent basis.

In claim 31, line 1, the phrase "said electrodes" is vague. Which electrodes are being referred to? In line 6, the phrase "said sensor plane" lacks antecedent basis.

In claim 33, lines 4-5, the phrase "said electrodes" is vague.

In claim 34, line 4, the phrase "said sensor plane" lacks antecedent basis.

In claim 37, line 3, the phrase "said sensor plane" lacks antecedent basis.

In claim 41, line 4, the phrase "said sensor plane" lacks antecedent basis.

In claim 45, line 24, the word – second – should be inserted before the word "frame".

In claim 46, line 34, the phrase "said motion" is vague. Is this referring to the motion of a second portion of the first subassembly or the motion of a second portion of the second subassembly?

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-12, 17-28 and 34-44 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,189,381 (Huang et al.).

Huang et al. discloses an angular rate sensor comprising, as illustrated in Figures 1-6, a sensing subassembly having a planar frame 16 parallel to a sensing plane; a linkage 17 connected to and within the frame includes a first mass 1 and a second mass 2 moving in opposite directions perpendicular to the plane; an actuator 23 for driving a first portion of the subassembly at a drive frequency; a transducer 26,27 for sensing motion of a second portion of the subassembly responsive to angular velocity. (See, column 2, line 14 to column 3, line 39).

With regards to claims 2-12, 17-28 and 34-44, Huang et al. further discloses the arrangement of the actuator is electrostatic; the arrangement of the transducer is capacitive; the first portion is the linkage or the frame; the second portion is the frame or the linkage; the frame is circular or rectangular; holes on the masses; a plurality of flexures; plurality of trenches; a silicon cap wafer. (See, column 4, line 18 to column 5, line 29).

Art Unit: 2856

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,189,381 (Huang et al.).

With regards to claims 45-49, the claims are commensurate in scope with the above claims and are rejected for the same reasons as set forth above.

However, the only difference between the prior art and the claimed invention is having a second subsensor for measuring angular velocity in a second direction.

It would have been obvious to a person of ordinary skill in the art to have readily recognize the advantages and desirability of having a second subsensor to measuring angular velocity in a second direction as the first subsensor since this is a mere design choice of duplicating parts for a multiplied effect, such as measuring angular velocity in a different direction. (Note: St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7<sup>th</sup> Cir. 1977)).

***Allowable Subject Matter***

7. Claims 13-16 and 29-33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form

Art Unit: 2856

including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references cited are related to angular velocity sensors.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

hck  
August 6, 2004

HELEN KWOK  
PRIMARY EXAMINER  
*Helen Kwok*